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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,364	08/22/2003	Jere R. Anderson	T0428.70146US00	8634

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EXAMINER

KUHNS, ALLAN R

ART UNIT PAPER NUMBER

1732

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,364

Applicant(s)

ANDERSON ET AL.

Examiner

Allan Kuhns

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-108 is/are pending in the application.
- 4a) Of the above claim(s) 59-76 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-58 and 76-106 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 063004&102104.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1.Applicant's election without traverse of Group I, claims 1-58 and 76-106 in the reply filed on January 5, 2006 is acknowledged.

2.Claims 59-75, 107 and 108 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on January 5, 2006.

3.Reference WO 99/47573, designated as "X" in a foreign search report, was not relied upon because it appeared not to address the claimed degree of water absorption with sufficient specificity.

4.The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5.Claims 1-19, 23-36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noel et al. (5,904,965). Noel et al. disclose or suggest the basic claimed foam article including a thermoplastic elastomer having a submersion water absorption within the range required by the equation in independent claims 1 and 25 (note column 19, lines 6-20). Noel et al. appear to be silent with regard to a melt strength enhancing additive comprising fluorine, as in claim 1, or a different polymer type, as in claim 25, such that it would have been obvious to one of ordinary skill in the art to form the article without such additives since Noel et al. give no indication that such additives would be required.

Noel et al. teach or suggest a water absorption value within the ranges of claims 2-4, 6, 7, 9, 10, 12, 13, 26-28, 30 and 31, based on the low water absorption recited at column 19, line 18 and preferred foam densities disclosed at column 9, lines 20-26.

Noel et al. Noel et al. teach or suggest densities within the ranges of claims 5, 8, 29 and 32 at column 9, lines 20-26. Noel et al. teach or suggest forming a foam thermoplastic elastomer of microcellular material, as in claims 14-16 and 33-35, based on cell sizes disclosed at column 9, lines 29-33, and Official Notice is taken by the examiner that it is known to vulcanize or crosslink TPE material, as in claims 17 and 36. Noel et al. teach the formation of a seal, as in claim 19, teach the use of non-chemical blowing agents, as in claim 17, and do not require an acrylic-modified PTFE, as in claim 23. Although Noel et al. appear not to conduct a U test for water absorption, it is submitted that a U-test result on the foam article of Noel et al. would inherently lie within the range of claim 24 or 40 based on the wide disparity between the submersion test and U-test illustrated in applicants' Table 6. It is noted by the examiner that what is being evaluated here is a foam structure, not a method of determining a physical property of that structure.

6. Claims 20-22, 37-39, 41-58 and 76-106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumbauld (5,070,111). Dumbauld teaches or suggests a foam thermoplastic elastomer article and is silent with regard to (1) a melt strength enhancing additive comprising fluorine and a surface layer, as in claims 20-22 and 41-43, and (2) a melt strength enhancing additive of a different polymer type and an auxiliary surface layer, as in claim 37-39 and 50-52. Thus, it would have been obvious

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to one of ordinary skill in the art to form a foam thermoplastic article without these additives or extra layers since a reading of Dumbauld would have caused one of ordinary skill in the art to consider them to be superfluous. Dumbauld teaches a water absorption test based on submersion or immersion at column 2, lines 44-54 and based on the results for foam density and water absorption % listed in Table I of Dumbauld, one of ordinary skill in the art would have expected water absorption results which meet the formula result or absolute numerical range as in claims 20-22, 37-39, 41, 44, 45, 47, 48, 53, 54, 56 and 57. Dumbauld do not teach the conduct of a U-test for water absorption, but based on the values for the immersion test recited in Table I of this reference and the wide disparity between the submersion test and U-test presented in Table 6 of Applicants' specification, it is submitted that results for a U-test conducted for the foam article of Dumbauld would inherently fall within the ranges of claims 49, 58 and 76-106.

Dumbauld teaches a foam article with a density range within the ranges of claims 46 and 55. Official Notice is taken by the examiner that it is known to produce thermoplastic elastomeric foam materials having structure or physical properties as in claims 80-83 and 96-99. Dumbauld effectively teaches forming a foam article without a residual chemical foaming agent, as in claims 84 and 100, and at least suggests an article having an absence of coating, as in claims 86-87 and 102-103, as well as an absence of acrylic modified PTFE, as in claim 88. Dumbauld also suggests cured or vulcanized EPDM, as in claims 83 and 99. Dumbauld teaches the use of the article as a seal, as in claims 85 and 101, at column 3, line 52.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (571) 272-1202. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Allan R. Kuhns*  
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PRIMARY EXAMINER AU 1732  
3-15-06